

UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF ILLINOIS

UNITED STATES OF AMERICA,)	
Plaintiff,)	
)	No. 21 CR-618-4, 1
v.)	
)	Honorable Martha M. Pacold
CHRISTOPHER THOMAS,)	
CHARLES LIGGINS,)	
Defendants.)	

**CHRISTOPHER THOMAS' & CHARLES LIGGINS' MOTION TO EXCLUDE
EXPERT TESTIMONY REGARDING FIREARM TOOLMARK ANALYSIS**

CHRISTOPHER THOMAS & CHARLES LIGGINS, by and through their respective attorneys, pursuant to Fed. R. Evid. 702, *Daubert v. Merrell Dow*, 509 U.S. 579 (1993), and *Kumho Tire Co. v. Carmichael*, 526 U.S. 137 (1999), move this Court to enter an order excluding any expert testimony regarding firearm toolmark analysis; or, in the alternative, to conduct an evidentiary hearing. In support thereof, it is stated:

I. Introduction

The government has alleged that Mr. Thomas and Mr. Liggins were members of a criminal enterprise known as "O-BLOCK." The indictment further alleges that on August 4, 2020 they engaged in the murder of FBG DUCK and the attempted murders of two other persons. The event occurred on Oak Street in Chicago. As part of the discovery, the government has tendered an Illinois State Police ("ISP") lab report which purports to identify certain cartridge casings found on the ground at the scene of the shooting at Oak Street. Additionally, one casing was found in the windshield well of a car alleged to be at the scene of the shooting. A firearm found at another location was also analyzed

against some of the cartridges casings found at the scene of the shooting.

Specifically, the report concludes that certain cartridge casings were fired from the same gun because they bear similar markings, and that certain cartridge casings were fired from the recovered gun. The government has also disclosed that the ISP analyst who examined the firearm and cartridge casings will be called to testify as an expert concerning her work and the results contained in her report. (See Govt Expert Disclosure, in part, attached as Exhibit 1.) Mr. Thomas and Mr. Liggins now ask that this testimony be excluded because it is not sufficiently reliable.

II. Rule 702, *Daubert*, and *Kumho*

Rule 702 of the Federal Rules of Evidence, which governs expert testimony, provides:

If scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education may testify thereto in the form of an opinion or otherwise, if (1) the testimony is based on sufficient facts or data, (2) the testimony is the product of reliable principles and methods, and (3) the witness has applied the principles and methods reliably to the facts of the case.

Under Rule 702, the district court functions as a “gatekeeper” and must evaluate the admissibility of proffered expert testimony. *United States v. Glynn*, 578 F. Supp 2d 568, 570-71 (S.D.N.Y. Sept. 22, 2008) (Rakoff, J.). The current version of the rule reflects the Supreme Court’s holdings in *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579 (1993), and *Kumho Tire Co. v. Carmichael*, 526 U.S. 137 (1993). In *Daubert*, the Court, concerned with the undue influence so-called expert testimony may have over a jury, established a flexible, factor-based approach to determine the reliability of such testimony. 509 U.S. at 593-94; *see also United States v. Diaz*, 2007 WL 485967 at *4 (N.D.Cal. Feb. 12, 2007) (Alsup, J.). These factors may include: (1) whether a method can or has been tested; (2) the known or potential rate of error; (3) whether the methods have been subject to peer review; (4) whether there are standards controlling the technique’s operation; and, (5) the

general acceptance of the method within the relevant community. *Daubert*, 509 U.S. at 593-94.

Expert testimony includes not just scientific testimony, but rather all testimony based on specialized knowledge. *Kumho*, 526 U.S. at 147; *see also United States v. Conn*, 297 F.3d 548, 555 (7th Cir. 2002). In analyzing proffered expert testimony, the Court is free to deviate from the actors listed in *Daubert* and “fashion an approach more precisely tailored to an evaluation of the particular evidentiary submission” at hand. *Conn*, 297 F.3d at 556. The fundamental task nevertheless remains the same: to ensure relevance and reliability. *Kumho*, 526 U.S. at 151-52.

III. The Standard Methodology of Firearms Identification is Unreliable

The principle underlying firearms identification is that “no two firearms should produce the same microscopic features on bullets and cartridge cases such that they could be falsely identified as having been fired by the same firearm.” *United States v. Monteiro*, 407 F. Supp. 2d 351, 361 (D. Mass. Jan. 6, 2006), *citing* Erich D. Smith, *Cartridge Case and Bullet Comparison Validation Study with Firearms Submitted in Casework*, 36 AFTE J. 130 (2004); *see also* Sally A. Schehl, *Firemark Tools in the FBI Laboratory: Part One*, Forensic Science Communications (April 2000), available at: <https://www.fbi.gov/about>. These marks, known as “toolmarks,” stem from the manufacturing process. Proponents of firearms identification contend that the “process of cutting, drilling, grinding, hand-filing, and, very occasionally, hand polishing...will leave individual characteristics” on every firearm. *Monteiro*, 407 F. Supp 2d at 359, *citing* Brian J. Heard, *Handbook of Firearms and Ballistics* 127 (1997). Thus, they contend, that when a shot is fired from that firearm, “the various components of the ammunition come into contact with the firearm at very high pressures. As a result, the individual markings on the firearm parts are transferred to the ammunition.” *Id.* at 359-60.

For example, “the expansion of the fired cartridge and the high pressures propelling the bullet

through the bore of the barrel press and scrape the bullet against the rifling as it heads toward the muzzle. The fired bullet, as a result, will bear the negative impressions of the grooves in a rifled barrel.” See Schehl, *supra*. The cartridge case, on the other hand, is “slammed into the standing breech face,” where “some of the individual toolmarks left on the breech face...are replicated on the surface of the cartridge case.” *Monteiro*, 407 F. Supp. 2d at 360, citing *Heard*, *supra*, at 131. Additional marks may be left on the ammunition “when parts of the firearm, like the firing pin, the extractor, or the ejector, are moved across the cartridge case.” *Id.*, citing *Theory of Identification*, Association of Firearm and Toolmark Examiners (“AFTE”), 30 AFTE J. 86, 88 (1998).

A. Class, Subclass, and Individual Characteristics

Examiners classify toolmarks in three categories: class, subclass, and individual characteristics. *Id.*, citing AFTE *Theory of Identification*, at 87-88. The goal of toolmark examination “is to distinguish between class and sub-class characteristics on one hand, and individual characteristics on the other, which ostensibly apply to the particular gun in question.” *United States v. Green*, 405 F. Supp. 2d 104, 110-11 (D. Mass., Dec. 20, 2005) (Gertner, J.). Class characteristics are defined as “family resemblances” which are present in all firearms of the same make and model. *Monteiro*, 407 F. Supp. 2d at 360. Class characteristics “potentially reproduce similar marks on all ammunition fired from a particular make and model of a firearm.” *Id.* Specifically, class characteristics are inherent in all weapons of the same model and describe their details in general: caliber (diameter) of the bullet, the number of land and groove impressions, the direction of twist of the land and groove impressions, and the width of the land and groove impressions.

Subclass characteristics, in contrast, “are produced incidental to manufacture” and “can arise from a source which changes over time.” *Id.*, citing AFTE *Theory of Identification*, *supra*, at 88. Thus,

subclass characteristics may only be present on a subset of guns, “such as those manufactured at a particular time and place.” *Id.* They cannot be considered class characteristics because they are not common to all units of a particular make and model of firearm.

Finally, individual characteristics are “[r]andom imperfections produced during manufacture or caused by accidental damage,” which, according to proponents of firearms identification, “are unique to that object and distinguish it from all others. *Id.*, citing Heard, *supra*, at 132.

B. The Flaws in Firearms Identification

There are a number of pitfalls associated with the theory of firearms identification. Initially, the belief that the markings on ammunition fired from the same firearm will render a perfect match is not rooted in reality. *Id.* at 362; *see also Green*, 405 F. Supp. 2d at 111. Indeed, “in the real world, there is no such thing as a perfect match.” *Id.*, citing Alfred A. Biasotti, *A Statistical Study of the Individual Characteristics of Fired Bullets*, 4 J. Forensic Sci. 34, 44 (1959). Biasotti’s 1957 study found that only 21-38% of marks will match up on bullets fired by the same gun, while 15-20% of marks will match up on bullets fired by different guns of the same make and model. *Id.*, citing Biasotti, *supra*, at 37-40, 90. The same is true of cartridge cases. As the *Green* court noted,

Even if the marks on all the casings are the *same*, this does not necessarily mean they came from the *same gun*. Similar marks could reflect class or sub-class characteristics, which would define large numbers of guns manufactured by a given company. Just because the marks on the casings are *different* does not mean they came from *different guns*. Repeated firings from the same weapon, particularly over a long period of time, could produce different marks as a result of wear or simply by accident.

Green, 405 F. Supp. 2d at 107 (emphasis in the original).

Other snags abound as well. For instance, a particular firearm’s markings will change over time; “marks present at one period may not be there at another,” which may impact the reliability of “matches” of ammunition fired years apart. Moreover, firearms do not wear uniformly; rather, this is

generally dependent on the kind of gun in question and the material of which it is composed. For example, “[a] Hi Point is one of the cheapest guns made. It is not a particularly high-quality gun, in part because it is made with softer steel (10/10 steel) than other firearms. Because it is soft, it is more susceptible to wear over time than the steel in other firearms.” *Green*, 405 F. Supp. 2d at 112.

Additionally, two-dimensional analysis, used by many firearms examiners, can be misleading. *Id.* at 111. While a “pattern may look like a class characteristic, the particular depth of the line examined could be an individual one.” *Id.* Even when two-dimensional analysis is not used, distinguishing between class, subclass, and individual characteristics is difficult. *Monteiro*, 407 F. Supp. 2d at 363. Thus, there is a real danger of confusing categories of characteristics, resulting in erroneous analyses. *Id.* Finally, fired ammunition is rarely in a condition to permit perfect comparison. “The bullets and/or shell casings recovered from the crime scene may be damaged, fragmented, crushed, or otherwise distorted in ways that create new markings or distort existing ones.” *United States v. Glynn*, 578 F. Supp. 2d 567, 573 (S.D.N.Y., Sept. 22, 2008) (Rakoff, J.); *see also Green*, 405 F. Supp. 2d at 110 (“[E]ven assuming that some of these marks are unique to the gun in question, the issue is their significance, how the examiner can distinguish one from another, which to discount and which to focus on, how he is qualified to do so, and how reliable his examination is.”)

C. Lack of Objective Standards

Further muddling the analysis is the fact that there are no objective, quantitative standards for determining whether two ammunition components match. *Id.*; *See also Glynn*, 578 F. Supp. 2d at 570-71; *Green*, 405 F. Supp. 2d at 114. The conclusion that two bullets or cartridge cases “match” one another “is based on a subjective ‘threshold...held in the mind’s eye of the examiner and...based largely on training and experience in observing the difference between known matching and known

non- matching toolmarks.” *Monteiro*, 407 F. Supp. 2d at 362-63, citing Richard Grzybowski et al., *Firearm/Toolmark Identification: Passing the Reliability Test Under Federal and State Evidentiary Standards*, 35 AFTE J. 209, 213 (2003). There is “no application of probability studies and statistics to the field of firearm identification.” *Id.* at 363.

In recent years, firearms examiners have rested on the notion of “sufficient agreement,” which ATFE defines as follows:

This “sufficient agreement” is related to the significant duplication of the random toolmarks as evidenced by the correspondence of a pattern or combination of patterns of surface contours. Significance is determined by the comparative examination of two or more sets of surface contour patterns comprised of individual peaks, ridges, and furrows. Specifically, the relative height or depth, width, curvature and spatial relationship of the individual peaks, ridges and furrows within one set of surface contours are defined and compared to the corresponding features in the second set of surface contours. Agreement is significant when it exceeds the best agreement demonstrated between the toolmarks known to have been produced by different tools and is consistent with agreement demonstrated by toolmarks known to have been produced by the same tool. The statement that “sufficient agreement” exists between two toolmarks means that the likelihood that another tool could have made the mark is so remote as to be considered a practical impossibility.

Id. at 363, citing AFTE *Theory of Identification*, *supra*, at 86.

Disturbingly, the circular concept of “sufficient agreement” depends almost entirely on the specific examiner’s knowledge of class and subclass characteristics of hundreds, if not thousands, of individual firearms. The concept is not based on “any quantitative standard for how many striations or marks need to match or line up. Instead, it is based on a holistic assessment of what the examiner sees,” and complicated by the “real world” hazards described above. *Id.* at 364, citing Grzybowski et al., *supra*, at 214. As *Green* notes, this “methodology is of particular concern in distinguishing subclass characteristics from individual characteristics. The first time an examiner observes a particular sub-class characteristic, he may assume it is an individual characteristic.” *Green*, 405 F. Supp. 2d at 112 n. 14. For this reason, many Courts have concluded that “whatever else ballistics identification

analysis [can] be called, it [can]not be fairly called ‘science.’” *Glynn*, 578 F. Supp. 2d at 570; *see also Monteiro*, 407 F. Supp. 2d at 365 (“Firearm identification evidence straddles the line between testimony based on science and experience.”).

IV. Criticism within Scientific Literature

Significantly, a 2008 report authored by the National Research Council Committee to Assess the Feasibility, Accuracy, and Technical Capability of a National Ballistics Database (“NRC Report”) casts serious doubt on the theory underlying firearms identification. The NRC Report determined:

Additional general research on the uniqueness and reproducibility of firearm- related toolmarks would have to be done if the basic premises of firearms identification are to be put on a more solid scientific footing...

...

Fully assessing the assumptions underlying firearms identification would require careful attention to statistical experimental design issues, as well as intensive work on the underlying physics, engineering, and metallurgy of firearms.

Committee to Assess the Feasibility, Accuracy, and Technical Capability of a National Ballistics Database, National Research Council, *Ballistics Imaging* (National Academies Press 2008, available at <http://books.nap.edu/catalog/12162.html>) (“NRC Report”) at 82. The NRC report concluded that “the validity of the fundamental assumptions of uniqueness and reproducibility of firearm-related toolmarks has not been fully demonstrated.” *Id.* at 3, 8.

Several years later, in 2016, the President’s Council of Advisors on Science and Technology (“PCAST”) released a report to the President entitled “Forensic Science in Criminal Courts: Ensuring Scientific Validity of Feature Comparison Methods.” PCAST Report available at: <https://obamawhitehouse.archives.gov/administration/eop/ostp/pcast/docsreports>. One of the feature comparison methods discussed in the report is firearms toolmark analysis.

The report concurred with the conclusions of the NRC Report, “casting considerable doubt on the reliability of the theory behind matching pieces of ballistics evidence.” *United States v. Shipp*,

422 F. Supp. 3d 762, 767 (E.D.N.Y. 2019). Ultimately, the PCAST report found that “the current evidence [concerning firearm toolmark identification] still falls short of the scientific criteria for foundational validity. While the report noted that one appropriately designed black-box study of the discipline had been completed since the NRC report¹, “[t]he scientific criterial for foundational validity require that there be more than one such study, to demonstrate reproducibility², and that the studies should ideally be published in peer-reviewed scientific literature.” PCAST Rprt at 11-12.

V. Case Specific Issues

A. *Suggestive Testing/Contextual Bias*

The ballistic “matches” at issue in this case were made after law enforcement, on information and belief, instructed ISP to compare specific cartridge casings against each other, and cartridge casings against a recovered firearm to see if they matched. Unnecessary details were provided to the analyst. The analysis and testing that ensued, therefore, was not blind. At least one court has likened this kind of procedure to a show up, as opposed to a lineup. *Green*, 405 F. Supp. 2d at 115-16.

¹ The PCAST report found that the other studies it considered “were not appropriate for...estimating the reliability” of firearms analysis “because they employed artificial designs that differ[ed] in important ways from the problems faced in casework.” PCAST Report at 106. Because of their design flaws, these older studies “seriously underestimate[d] the false positive [match] rate.” *Id.* at 111.

² Under Rule 702, “[a]n expert must offer good reason to think that his approach produces an accurate estimate using professional methods, and this estimate must be testable. Someone else using the same data and methods must be able to replicate the result.” *Zenith Electronics Corp. v. WH-TV Broadcasting Corp.*, 395 F.3d 416, 419 (7th Cir. 2005) (emphasis added), see also *Smelser v. Norfolk Southern Ry. Co.*, 105 F.3d 299, 304 (6th Cir. 1997)(Finding testimony improperly admitted in part because expert had failed to establish repeatability.). Here, there was no evidence that the error rates found in the single, properly-designed study had been, or could be, reproduced—an essential element of reliable science. *Rembrandt Vision Technologies L.P. v. Johnson & Johnson Vision Care, Inc.*, 282 F.R.D. 655, 667 (M.D. Fl. 6/ 4, 2012).

It commented on the inherent problems with forensic evidence show-ups:

The only weapon [the Government's expert] was shown was the suspect one; the only inquiry was whether the shell casings found earlier matched it. It was, in effect, an evidentiary "show-up," not what scientists would regard as a "blind" test. He was not asked to try to match the casings to the other test-fired Hi Point weapons in police custody, or any other gun for that matter, an examination more equivalent to an evidentiary "line-up." His work was reviewed by another officer, who did the same thing—checked his conclusions under the same conditions— another evidentiary "show-up."... In effect, the examination was an evidence show up (do these casings come from this gun?), not an evidence line-up. (from which gun do these casings come?)

Id. at 107-108.

The only weapon test-fired was the suspect one. No other gun in law enforcement custody was tested against the recovered shell casings. Moreover, to date,³ all that has been received concerning communications between the ISP lab and the Chicago police is an ISP "Evidence Submission Form for the Chicago Police Department." There, the improper and suggestive nature of the communication between the Chicago detectives and the Division of Forensic Services of the ISP examiner seriously undermined the conclusions drawn by the examiner. (See Evidence Submission Form for the Chicago Police Department at Ex 2.) Found on that form are unnecessary details of who the suspects were and where casings and a firearm were recovered. Specifically, law enforcement fed the names of all the defendants, their IR and SID numbers and where the casings were found. The form also indicated that a firearm was found on another person, not any defendant in the case, who was charged with illegally possessing the firearm. (Ex 2 at 2)

Regarding the firearm submitted for testing which was found at another location on another

³ Counsel has asked the government on several occasions for all communications' documents/request forms from CPD to ISP concerning ballistics' analysis. They have represented that Exhibit 2 is the only communication document in their possession, and/or exists. Counsel, however, was informed by the government on August 31, 2023 that additional ballistics discovery will be disclosed next week. As such, the named defendants herein reserve the right to supplement this motion with any relevant additional information. Also, if the discovery reveals additional issues surrounding the ballistics' evidence in this case, defendants reserve the right to address those accordingly.

person who was arrested, the ISP lab was informed: “the BIA indicated a High Confidence Correlation link to the reporting detective's case under RD# JD320760 and the shell casing inventoried under 14748461.”(our case) BIA is “Ballistic Information Alert.” It is a computer generated report delivered to a detective that the computer “believes” two different events or cases have the same gun represented. This information was known before any independent testing was done by the ISP analyst. This is highly suggestive that a “match” will occur.

If firearms identification is truly “scientific” as its proponents suggest, providing any information about the evidence is unjustified and taints the entire process. The suggestive nature of the comparisons casts doubt on the reliability of the results in this matter.

B. Current State of the Law

The defense is aware that there are numerous cases where expert toolmark identification is admitted. See, e.g., *United States v. Johnson*, 2015 WL 5012949 (N.D. Cal. 2015) (collecting cases); *United States v. Diaz*, 2007 WL 485967 (N.D. Cal. 2007) (collecting cases). However, while general acceptance among courts may indicate that certain disciplines are reliable, it does not move the needle when it comes to firearms analysis. As one court stated, the “reliance on long-standing use of ballistics evidence in the courts is troubling. It runs the risk of ‘grandfathering in irrationality,’ without reexamining it in light of *Kumho* and *Daubert*. It arguably ignores the mandate of *Daubert*, especially where the courts are relying on pre-*Daubert* acceptance of a given scientific technique.” *Green*, 405 F. Supp. 2d at 123.

But the tides are turning. Recent decisions have voiced concerns about the scientific validity of toolmark analysis, and, while admitting the evidence in some capacity, have imposed considerable restrictions on expert testimony. See, e.g., *Shipp*, 422 F. Supp. 3d at 783-84. In *Shipp* the court limited

the expert's testimony:

Detective Ring [analyst] may not testify, to any degree of certainty, that the recovered firearm is the source of the recovered bullet fragment or the recovered shell casing.

It went on to say:

This limitation is in line with, albeit slightly more restrictive than, limitations that other federal district courts have placed on toolmark analysis testimony...^{*784} See, e.g., *White*, 2018 WL 4565140, at *3 (precluding expert from testifying “to any specific degree of certainty as to his conclusion that there is a ballistics match”); *Glynn*, 578 F. Supp 2d at 574-75 (limiting expert's testimony to stating that a match was “more likely than not”); see also *Simmons*, 2018 WL 1882827, at *8 (limiting testimony to a “a reasonable degree of ballistic ...certainty”); *Ashburn*, 88 F. Supp. 3d at 249 (same); *Taylor*, 663 F. Supp. 2d at 1180 (same). This more restrictive limitation is appropriate given the concerns raised by the PCAST Report about the lesser probative value of certain study designs and the reproducibility and accuracy of an individual examiner's application of the “sufficient agreement” standard. Placing this limitation on Detective Ring's testimony will prevent the jury from placing unwarranted faith in an identification conclusion based on the AFTE Theory, which the current research has yet to show can reliably determine, to a reasonable probability, whether separate pieces of ballistics evidence have the same source firearm. However, it will still allow the jury to benefit from Detective Ring's extensive knowledge and experience examining ballistics evidence.

Likewise, in *United States v. Davis*, 2019 WL 4306971, at *7 (W.D.Va. Sept. 11, 2019), the court disallowed the expert to:

opine that certain cartridge cases were fired by the same gun;
opine that a cartridge case is a “match” to other cartridge cases or firearms;
opine that toolmarks reflect a “signature” permitting the conclusion that certain cartridge cases may be traced to a single firearm; or
express confidence in their opinions to any specific level of certainty, including whether the examiners' observations exclude other firearms or cartridge cases “to a level of practical impossibility.

See also *United States v. Felix*, 2022 WL 17250458, (D. Virgin Islands, Nov 28, 2022) (expert precluded from testifying that the cartridge cases that were recovered matched, or came from, the firearm that was recovered); *United States v. Adams*, 444 F.Supp.3d 1248, 1266 (D. Or. 2020) (no evidence allowed relating to expert's methodology or conclusions relating to whether the shell casings matched the recovered Taurus admitted at trial).

Recently, in this district, in *United States v. Blackman*, 2023 WL 3440384 at *9, Judge Blakey placed limits on the government's toolmark expert:

The Court has reviewed the various iterations of limitations Defendants propose, and finds the following limitations below reasonable and necessary to ensure the reliability of testimony pursuant to Rule 702. As noted above, the Government has already mitigated concerns about the degree of certainty with which their experts will testify in this case, agreeing in advance that its experts will not testify to 100% certainty in their identifications but rather that based upon their training and experience, they would not expect any other firearm to produce the markings observed. In the same vein, this Court holds that the experts shall not use language that implies the methods are an exact science or reflect any specific statistical degree of certainty (100% or otherwise).

... As such, the experts should refrain from testifying about statistical guarantees (e.g. there is a "one in a million chance" the match is a coincidence)

Defendants also highlight that error rates cannot be developed for an individual examiners' casework, because there is no "answer key" in the real world... Defendants suggest that examiners in past cases, knowing this, have inappropriately relied upon the volume of their previous examinations to bolster the jury's impression that the results of a given case are accurate. The Court excludes misleading testimony of this sort here, adopting the line that the Department of Justice has set forth: "An examiner shall not cite the number of examinations conducted in the forensic firearms/toolmarks discipline performed in his or her career as a direct measure for the accuracy of a conclusion provided. An examiner may cite the number of examinations conducted in the forensic firearms/toolmarks discipline performed in his or her career for the purpose of establishing, defending, or describing his or her qualifications or experience." See DOJ Ballistics ULTR at 3. The Court directs the examiners in this case to follow the same limitation.

And Judge Tharp in *United States v. Mardi Lane*, 17 CR 40, April 12, 2023, Dkt# 607 at 4, also imposed limits on the government's toolmark expert's testimony: "[B]ut they are prohibited from quantifying or otherwise describing the degree of certainty they have in their conclusions..."

While there is more than sufficient reason to exclude firearms identification evidence in its entirety, if the Court is inclined to admit any such evidence, Mr. Thomas and Mr. Liggins request that the examiners be prohibited from testifying, at the very least, that a particular firearm is the source of a recovered shell casing, or similarly, that recovered shell casings were fired from the same

firearm. This is in addition to any further restrictions imposed by the courts named above at *supra* 11-12 that this Court deems fit to impose.

VI. Conclusion

For all of the foregoing reasons, Christopher Thomas and Charles Liggins submit that firearm toolmark analysis is unreliable and inadmissible. Consequently, Mr. Thomas & Mr. Liggins respectfully request that this Court enter its order excluding firearm toolmark analysis from introduction into evidence pursuant to Fed. R. Evid. 702, *Daubert*, and *Kumho*, or, in the alternative, conduct an evidentiary hearing on the matter.

Respectfully submitted,

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